

# Measuring Student Hardship by Municipality: Free and Reduced-Price School Meal Eligibility and Other Metrics for Understanding Local Poverty and Income

## NEW HAMPSHIRE FISCAL POLICY INSTITUTE

Prepared for the House Finance Division II Committee Work Group  
with Members of the House Education Committee

### **Overview of Free and Reduced-Price School Meal Eligibility**

To be eligible for free or reduced-price school meals, a student must meet one of the following criteria:

- live in a household with an income below 185 percent of the federal poverty guidelines, which was \$40,182 for a three-person household for the 2020-2021 school year
- receive benefits through the Supplemental Nutrition Assistance Program (SNAP, also known as the Food Stamp Program in New Hampshire), the Temporary Assistance for Needy Families (TANF) program, or a federal food distribution program primarily for households on Native American reservations
- be a foster child under the legal responsibility of a foster care agency or court
- participate in their school's Head Start program
- match certain program definitions of children who are homeless, runaways, or migrants

Key Question: With potential changes to the implementation of free and reduced-price meals in school districts, is there a different metric that may serve as a proxy measure for poverty in a school district?

Short Answer: Currently, there is likely not a single measure as good as school meal program eligibility at directly measuring poverty among the student population. Other measures may complement free and reduced-price meal eligibility by either more directly measuring overall community wellbeing, or by providing additional assurances that the free and reduced-price meal measure accurately reflects poverty and near-poverty incomes for students at home. Rather than replacement, additions or layers to the education funding formula may be the approach that provides a greater degree of certainty. Additions to the formula may make the most beneficial use of the different insights these other data offer to complement free and reduced-price school meal eligibility.

## **Statewide Topline Numbers for Selected Potential Metrics**

Examples of measures of poverty or hardship among New Hampshire children:

- Free and reduced-price meal eligibility, grades 1-12<sup>1</sup>:
  - 38,624 children on October 1, 2019
  - 31,837 children on October 1, 2020
- Food Stamp Program enrollment<sup>2</sup>:
  - 28,458 children, 73,673 people in total on September 30, 2019
  - 26,892 children, 69,992 people in total on September 30, 2020
- Medicaid enrollment:
  - 87,919 children, 175,653 people in total on September 30, 2019
  - 95,608 children, 201,788 people in total on September 30, 2020
- People with poverty incomes, U.S. Census Bureau American Community Survey:
  - 17,609 children (+/- 2,992), 95,711 people (+/- 7,285) in total in 2019
- People within twice the poverty income amounts, American Community Survey:
  - 53,019 children (margin of error unpublished<sup>3</sup>), 247,658 people (+/- 12,449) in total in 2019

## **Requirements for Metrics**

For consideration in this document, datasets must be:

- 1) available at the local level with a high degree of uniformity in New Hampshire,
- 2) repeated with consistent methodologies or well-documented changes in methodologies when they occur, and
- 3) relatively reliable at the local level for distinguishing between communities.

## **Two Dimensions to Consider When Vetting Variables**

Measuring Student Economic Conditions ↔ Measuring Overall Community Wellbeing

High Level of Accuracy and Granularity ↔ Specific Desired Variable Measured

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<sup>1</sup> Eligibility data are published by the New Hampshire Department of Education.

<sup>2</sup> Both Food Stamp Program enrollment and Medicaid enrollment data are from the New Hampshire Department of Health and Human Services.

<sup>3</sup> Margin of error are unavailable due to the estimate's construction from midpoint estimates in published tables. All other margins of error are in published U.S. Census Bureau tables, and represent 90 percent confidence intervals.

## **Three Primary Types of Data**

### **Survey Data:**

- Description: collects information from a randomized sample of a population to better understand conditions for the entire population
- Strengths: often measures the variable of greatest interest
- Shortcomings: frequently subject to a high degree of uncertainty at the local level
- Examples: U.S. Census Bureau's American Community Survey, U.S. Bureau of Labor Statistics' Current Population Survey

### **Programmatic Data:**

- Description: data reported from programs, including programs providing services
- Strengths: high degree of granularity, no statistical uncertainty, likely will reach more people than a survey
- Shortcomings: based on program eligibility, risk of program changes, may require more action on the part of enrollees than a survey response
- Examples: Free and Reduced-Price School Meal Eligibility, Medicaid enrollment, the Food Stamp Program (Supplemental Nutrition Assistance Program/SNAP) enrollment, U.S. Internal Revenue Service tax return data

### **Modeled Data:**

- Description: uses multiple data sources and known relationships and correlations to interpolate or extrapolate new values based on known data
- Strengths: draws on research and multiple data sources to provide point estimates
- Shortcomings: uncertainty sometimes difficult to determine, no guarantee that model assumptions reflect reality in all cases
- Examples: New Hampshire Employment Security/U.S. Bureau of Labor Statistics' Local Area Unemployment Statistics, U.S. Census Bureau's Small Area Income and Poverty Estimates

## **Metrics Beyond School Meals to Consider for Measuring Local Poverty or Hardship**

### **Food Stamp Program Enrollment:**

- Description: *programmatic* data, percentage of the population enrolled in the Food Stamp Program by municipality or school district
- Strengths: relatively simple, income-focused eligibility requirements; available monthly
- Shortcomings: program eligibility may change at federal or state levels, lower enrollment among children currently than free and reduced-price school meal eligibility data may suggest, local practices for connecting residents may differ, response to the pandemic has differed from expectations
- Opportunities for tailoring: including only children in metric

### **Medicaid Enrollment:**

- Description: *programmatic* data, percentage of the population enrolled in Medicaid by municipality or school district
- Strengths: incorporates several different dimensions of hardship, eligibility largely focused on those with few assets and/or low incomes, reaches a larger percentage of the population than Food Stamps and other aid programs, available monthly
- Shortcomings: program eligibility complex and includes many different populations at varying income and asset thresholds, may focus more heavily on health risks, incorporates long-term care needs as well as short-term economic responses, program eligibility may change at federal or state levels
- Opportunities for tailoring: including only children with low incomes at home in metric

### **U.S. Internal Revenue Service Tax Return Data:**

- Description: *programmatic* data; based on tax returns by Zip Code; provides data by income group, type of filer, key credits claimed
- Strengths: rich dataset providing granularity relative to types of credits, reaches a very significant portion of the population (all who file federal taxes)
- Shortcomings: lowest income individuals may not be required to file income taxes and may be undercounted, no average or median reported in published tables with specific income brackets provided, published Zip Code data difficult to reliably translate into municipal or school district data, sets of returns from smaller communities may be suppressed, detailed tables may be suppressed, federal policy changes may affect returns and eligibility over time, reporting time delay
- Opportunities for tailoring: may be available by request at the municipal level from the U.S. Internal Revenue Service, may focus on higher income as a portion of population or on specific tax credits, such as Child Tax Credit or Earned Income Tax Credit

### **Median Household Income:**

- Description: survey data drawn from the U.S. Census Bureau's American Community Survey, measuring the estimated income level where half of households were above and half below over a five-year period
- Strengths: measures a key indicator directly, rather than a proxy measure, and not dependent on program eligibility or modeled assumptions, overall community economic wellbeing indicator less affected by outliers
- Shortcomings: statistical uncertainty makes comparing communities based on point estimates unreliable in most cases, based on five years of data with some reporting time delay, based on information provided by survey respondents, does not adjust for household sizes
- Opportunities for tailoring: using statistical significance testing relative to statewide median household income may permit implementation of categories, perhaps used for aid multipliers, rather than a continuous sliding scale based on point estimates

### **Small Area Income and Poverty Estimates:**

- Description: *modeled* data from the U.S. Census Bureau; published annually; uses primarily Internal Revenue Service tax return data, American Community Survey data, and SNAP enrollment by county, to model poverty annually by state, county, and school district for children aged five to seventeen years
- Strengths: measures a key indicator directly with emphasis on school districts, modeled data draws from several sources, appears to be completely independent of free and reduced-price school meal eligibility data
- Shortcomings: year-over-year swings in estimated poverty rate for small districts can be significant, larger districts appear impacted by statewide data, U.S. Census Bureau caveats calculations of poverty rates due to population measurement differences, reliance on county-level data, not available at municipal level
- Opportunities for tailoring: taking a multi-year average to smooth out some significant year-over-year swings

### ***Other Metrics to Potentially Consider, Depending on Scope of Measures Desired:***

- Modeled unemployment rate (from Local Area Unemployment Statistics program, averaged over *at least* three years)
- Wage and job changes at the county level (from New Hampshire Employment Security)
- New Hampshire Community Development Finance Authority, Community Progress Indicators (developed with assistance from NHFPI)

### ***Metrics to Avoid:***

- Poverty rate by municipality (American Community Survey, too uncertain)
- Wage or job changes at municipal level (less meaningful than regional employment measures)
- Temporary Assistance for Needy Families (TANF enrollment relatively low)

### **Dimensions to Consider**

*For Illustrative Purposes, Not All Metrics Included*

#### **Student Economic Conditions    Overall Community Wellbeing**

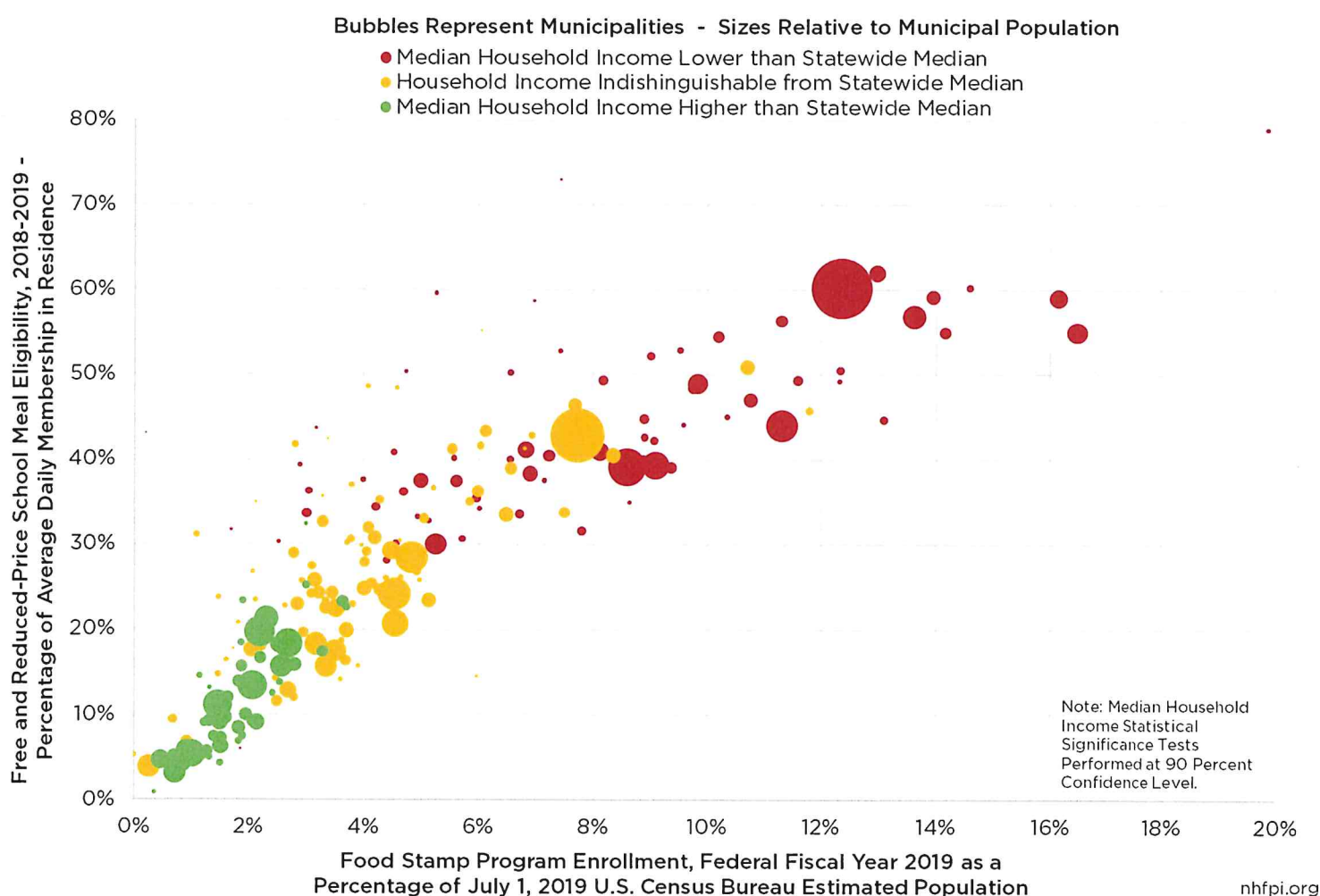
<b>High Level of Accuracy and Granularity</b>	<ul style="list-style-type: none"><li>• Free and Reduced-Priced School Meal Eligibility</li><li>• Food Stamp Program enrollment among children</li></ul>	<ul style="list-style-type: none"><li>• Total Medicaid enrollment</li><li>• Federal tax returns</li></ul>
<b>Specific Desired Variable Measured</b>	<ul style="list-style-type: none"><li>• Small Area Income and Poverty Estimates</li><li>• Child poverty rate by municipality</li></ul>	<ul style="list-style-type: none"><li>• Median household income</li><li>• Poverty rate by municipality</li></ul>

## Relationships Between Variables Enhance Understanding and Certainty

### NHFPI Example #1

This graph illustrates the relationships between:

- Food Stamp Program Enrollment (Percentage of Municipal Population, Average Enrollment from October 2018-September 2019, horizontal axis)
- Free and Reduced-Priced School Meal Eligibility (2018-2019, vertical axis)
- Median Household Income Relative to Statewide Median (2014-2018, color of circle)
- Municipal Population Estimates (July 2019, size of circle)

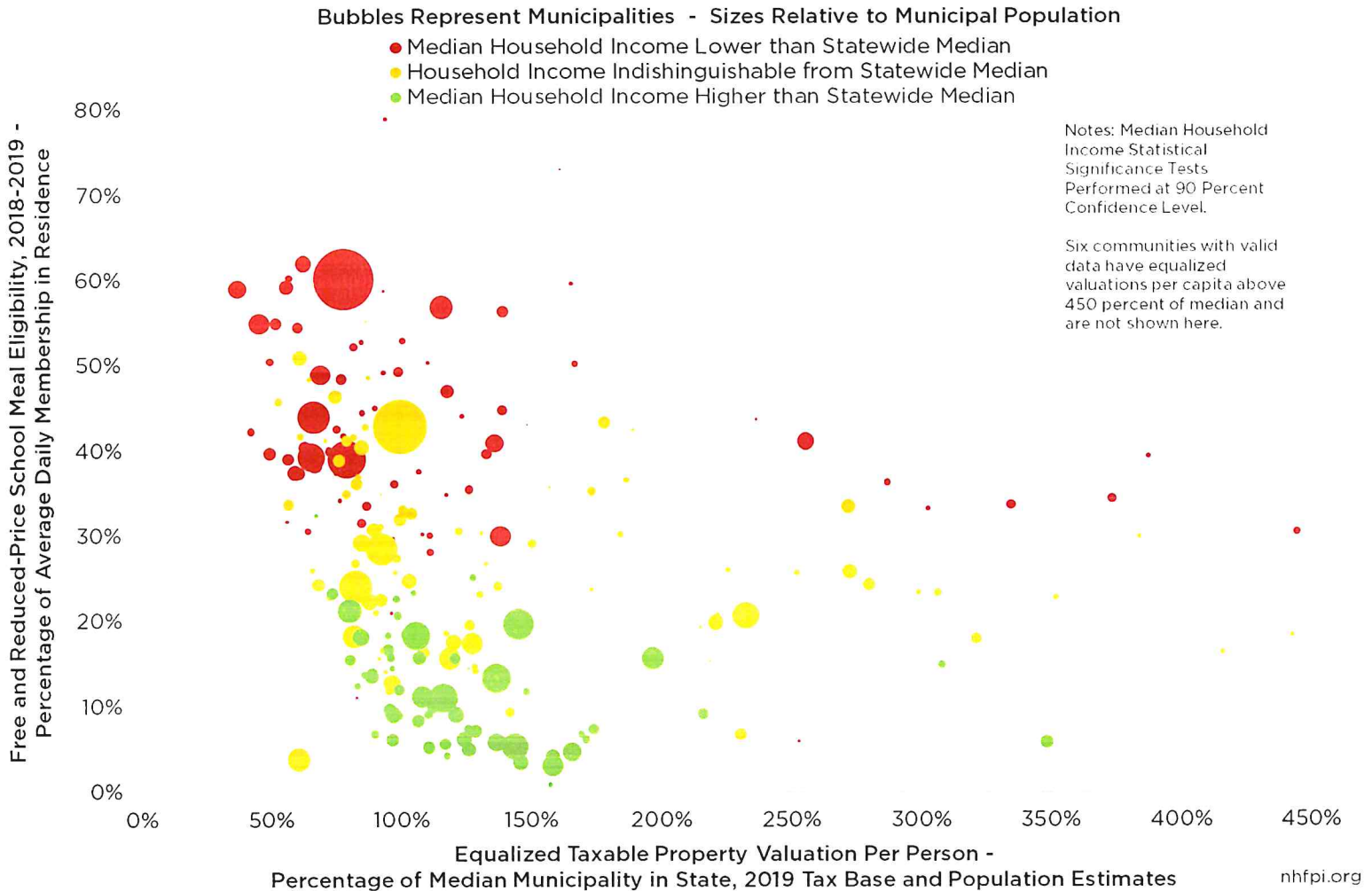


Sources: U.S. Census Bureau, Population Estimates Program, American Community Survey; New Hampshire Department of Health and Human Services; New Hampshire Department of Education

## NHFPI Example #2

This graph illustrates the relationships between:

- Equalized Taxable Property Valuation Per Person Relative to Median Municipality (Tax year 2019, horizontal axis)
- Free and Reduced-Priced School Meal Eligibility (2018-2019, vertical axis)
- Median Household Income Relative to Statewide Median (2014-2018, color of circle)
- Municipal Population Estimates (July 2019, size of circle)



Sources: U.S. Census Bureau, Population Estimates Program, American Community Survey; New Hampshire Department of Education; New Hampshire Department of Revenue Administration

## **Consideration of Regional Data**

In a scenario in which broader economic conditions are considered in an education funding formula that includes more data inputs, indicators available at the county level may be useful. These indicators could directly measure income, poverty, and housing constraints with sufficient accuracy to provide an adjustment to the formula.

## **Additional Resources and Citations**

[Presentation: Examining Local Economic Conditions and Fiscal Capacities](#) (presented to the New Hampshire Commission to Study School Funding) – New Hampshire Fiscal Policy Institute, July 20, 2020

[Issue Brief: Measuring New Hampshire's Municipalities: Economic Disparities and Fiscal Capacities](#) – New Hampshire Fiscal Policy Institute, August 29, 2018

[Issue Brief: Greater Investments Key for Students Facing Inequities Across New Hampshire](#) – New Hampshire Fiscal Policy Institute, August 25, 2021

[Community Progress Indicators](#) – New Hampshire Community Development Finance Authority

[American Community Survey](#) – U.S. Census Bureau

[Small Area Income and Poverty Estimates \(SAIPE\) Program](#) – U.S. Census Bureau

[SOI Tax Stats, Individual Income Tax Statistics, ZIP Code Data](#) – U.S. Internal Revenue Service

## **Contact Information for Additional Questions or Requests for Specific Resources**

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